Comment Summary on Landfill Stability Conceptual Rule Draft
October 18, 2005 Technical Advisory Committee Meeting
Educational Communications Board Building, 3319 West Beltline Hwy, Madison
website: http://dnr.wi.gov/org/aw/wm/solid/landfill/stability/index.htm

Attending: Sherren Clark (BT^2), Bob Ham (UW-Madison), Gerard Hamblin (WMWI), Dan Leclaire (WMWI), Gene Mitchell (DNR), John Reindl (Dane County), Joe Van Rossum (UW-Extension/SHWEC), Todd Watermolen (Onyx), Brad Wolbert (DNR); Terry Johnson (WMWI), Dan Otzelberger (Republic Services), Mike Ruetten (STS), Dale Lane (MWH), Mike Michels (Shaw Environmental), Bernie Krantz (RMT), Jay Warzinski (Onyx)

General Comments

1. This rule may increase disposal costs, which would adversely affect Wisconsin industries.

2. For landfills in nonattainment areas of the state, any increase in emissions (e.g., due to increased gas production) would require purchase of credits from someone else, limiting industrial activity and causing adverse economic effects.

3. Implementation of this rule would require broader sociological changes involving municipalities, households, and businesses. A commitment would be needed from these other entities.

4. The technical knowledge that is developed through implementation of this rule needs to be widely available, to avoid having just one operator with the "recipe" for meeting the goal. Progress reports need to be accessible to all.

5. This rule may create new business opportunities for some landfill operators by motivating them to find ways to make money through other waste management methods.

Contents of Stability Plans [NR 514.07(9)(a)]

Actions to Achieve Stability [NR 514.07(9)(b)]

Instead of the reference to the "materials specified in s. 287.07 (1m) to (4), Wis. Stats.," the rule should simply name the materials.

Landfill operators can't really initiate diversion, and have limited ability to initiate pre-landfill treatment. Other rules would be needed to accomplish anything but in-situ strategies. There is especially limited control over residential waste generators.

Diversion and processing might actually increase the amount of time needed to reach stability, as an increasing proportion of inert material would reduce the moisture availability to the remaining organics.

The in-landfill option should include controlled-leakage caps, i.e., soil-only caps.

This section is not needed. This information could be provided in guidance.

Most landfill operators will opt for in-landfill treatment – no incentive to do otherwise.

In-landfill is actually the riskiest path – not clear if bioreactors work, but diverted organics are gone from the picture.

Landfill Stability Plan Goals [NR 514.07(9)(c)]

Bioreactors are a new technology that isn't well enough understood to meet such stringent goals. Even EPA can't say for sure what the best practices are. The technology is not equal to the aggressive approach Wisconsin is proposing in this draft rule. Instead of a statewide rule, Wisconsin should offer incentives for a handful of landfills to conduct test bioreactors for the next 10 years.

Regarding reducing the gas production rate to 1 percent of the maximum monthly average, there are landfills that are 100 years old and that lack effective covers that are still producing gas at a higher rate.

It would be better to have a less ambitious set of goal numbers now, and tighten them up later when we understand the technologies better.

The goal should be achievable – but what is an achievable goal? As drafted, the goal appears to be almost complete reaction of organics – is this achievable?

To achieve the 1% goal in the 25-year timeframe would require a k value of .223. This is not realistic. Even .1 is probably not realistic post-closure unless cover systems are changed. 5%, or better, 10% would be a more realistic goal, and constitute a very small risk.

Getting to 1% or other very low percentage of maximum gas production would mean running a gas control system whose output cannot support a flare. If the amount of gas can't even support a flare, haven't you achieved the goal of accelerating stability?

Recommend keeping the 75% goal in (c)3, but substituting a performance-based criterion for the 1% goal in (c)1.

Goals should be risk-based. A lot of existing closed landfills in Wisconsin may not have achieved anything like these goals, but they represent no risk.

An alternative approach could be devised based on gas production: (1) gas control systems must be operated for at least 15 years; (2) if NMOCs are less than 50 MG/yr at the end of 15 years, system may be shut down; (3) once system is shut down, site is monitored monthly for 1 year to ensure there is no lateral gas migration, that

surface emissions are below 500 ppm methane, and that excessive pressures are not developing underneath the cap.

The gas concentration goal in (c)4 is problematic. Landfill gas, even in late stages of decomposition, should be about 50% methane. If the concentration of methane in the gas is below the LEL, it means it's being diluted (i.e., air is being drawn into landfill).

Items 4 and 5 (gas concentration and leachate performance goals) should be deleted; they are more appropriate for deciding when to shut off the gas control system.

Rule has a time horizon of 25 years or more, but federal RD&D rule only allows total of 12 years for additional liquids and alternate caps.

Evaluation of Stability Plan Performance [NR 514.09(9)(d)]

Reporting to the Department [NR 514.09(9)(e)]

The 5-year reevaluation is likely to conclude, at least for bioreactor projects, that the project won't meet the goal.

If a landfill is not on track towards meeting the goal at 5 years, they'd likely have to cut waste streams, with adverse impacts on the generators of those waste streams.

By the time of the 15 year report, it's too late to implement most strategies, like pre-processing or diversion. This puts a lot of the burden on the 5 and 10 year evaluation, when you have less data.

Department Review Timelines [NR 514.09(9)(f)]

Adjustment of Financial Responsibility [NR 520.10]